

(TM)

Rank	Score	Match	Length	DB	ID	Description	Pred. No.
1	683	100.0	101	1	W80552	Antiviral protein, cya	8.24e-60
2	683	100.0	101	1	W67369	N. ellipsosporium cyano	8.24e-60
3	683	100.0	101	1	W06811	Cyanovirin-N.	8.24e-60
4	683	100.0	109	1	W80553	Antiviral protein, cya	8.24e-60
5	683	100.0	109	1	W67370	FLAG epitope-cyanovirin	8.24e-60
6	683	100.0	109	1	W06812	FLAG-cyanovirin-N fusi	8.24e-60
7	88	12.9	618	1	W26541	Trypanosoma cruzi anti	9.36e-00
8	85	12.4	224	2	W76700	Mouse antioxidant prot	1.64e+01
9	85	12.4	224	2	W76599	Human antioxidant prot	1.64e+01
10	85	12.4	250	1	R34196	O-CSF.	1.64e+01
11	85	12.4	318	1	W09880	ACC oxidase GEFGE-1.	1.64e+01
12	82	12.0	358	1	W55071	Streptococcus pneumonia	2.86e+01
13	80	11.7	354	1	W30662	Human GDP-mannose 4,6	4.12e+01
14	80	11.7	354	1	W39739	Human GM4, 6D protein #	4.12e+01
15	80	11.7	372	1	W30663	Human GDP-mannose 4,6-	4.12e+01
16	80	11.7	372	1	W39740	Human GM4, 6D protein #	4.12e+01
17	79	11.6	706	1	W68743	BCL-6 zinc finger prot	4.94e+01
18	78	11.4	84	1	W52708	Streptococcus pneumonia	5.92e+01
19	78	11.4	463	1	W19800	Glycyl-tRNA synthetase	5.92e+01
20	76	11.1	787	1	W53946	L lactis MG1363 pfl pr	8.48e+01
21	76	11.1	1454	1	R42467	Feline infectious peri	8.48e+01
22	76	11.1	1454	1	R24397	Prod. of the S gene of	8.48e+01
23	76	11.1	1454	1	R42474	F5CV/FIPV chimerispi	8.48e+01

KW cytopathy; virus; HIV; infection.
 OS Nostoc ellipsoforum.
 PN US5843882-A.
 PD 01-DEC-1998.
 PF 27-APR-1995; 429965.
 PR 27-APR-1995; US-429965.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Boyd MR, Gustafson KR, McMahon JB, Shoemaker RH;
 DR WPI: 99-044625/04.
 DR N-PSDB: V34401.
 PT Nostoc ellipsoforum proteins or peptide(s) - with antiviral
 PT activity
 PS Claim 1: Column 25-26; 30pp; English.
 CC This sequence represents an antiviral protein, designated cyanovirin,
 CC from Nostoc ellipsoforum. The antiviral protein, or peptide of at least
 CC 9 amino acid residues, is used to inhibit the infectivity, replication
 CC and cytopathic effects of viruses, especially HIV-1 or HIV-2, in the
 CC treatment or prevention of viral infections.
 CC Sequence 101 AA;
 SQ

Query Match 100.0%; Score 683; DB 1; Length 101;
 Best Local Similarity 100.0%; Pred. No. 8.24e-60;
 Matches 101; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 LGKFSQTCYNIAIQSVLTSTCERNNGYNTSSIDLNSVIENVDSGLKWQPSNFETCRN 60
 QY 1 LGKFSQTCYNIAIQSVLTSTCERNNGYNTSSIDLNSVIENVDSGLKWQPSNFETCRN 60

Db 61 TOLAGSSSLAAECKTRAQOFVSTKINLDDHIANIDGTLKYE 101
 QY 61 TOLAGSSSLAAECKTRAQOFVSTKINLDDHIANIDGTLKYE 101

RESULT 3
 ID W06811 standard; Protein; 101 AA.
 AC W06811.
 DT 17-MAR-1997 (first entry)
 DE Cyanovirin-N.
 KW Cyanovirin-N; cyanobacterium; antiviral; virucide; HIV-1; HIV-2;
 KW SIV; human immunodeficiency virus; retrovirus; AIDS; therapy.
 OS Nostoc ellipsoforum.
 PN W0681107-A2.
 PD 31-OCT-1996.
 PF 26-APR-1996; U05908.
 PR 27-APR-1995; US-429965.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Boyd MR, Gustafson KR, McMahon JB, Shoemaker RH;
 DR WPI: 96-497638/49.
 DR N-PSDB: T45976.
 PT Antiviral protein from Nostoc ellipsoforum - used for treating or
 PT preventing viral infections, esp. infections caused by retroviruses
 PT such as HIV
 PS Claim 2: Page 78; 99pp; English.
 CC Cyanovirin-N (W06811) of Nostoc ellipsoforum shows antiviral
 CC activity against immunodeficiency retroviruses, esp. HIV-1, HIV-2
 CC and SIV. It was detected in aq. extracts of the cyanobacterium
 CC using an HIV-specific bioassay-guided strategy. It can be obtained by
 CC expression in host (esp. yeast, lactobacilli) cells transformed
 CC with a vector carrying cyanovirin-N sequences (see also T45978-79).
 CC It can also be produced as a conjugate with e.g. a toxin (esp.
 CC Pseudomonas exotoxin) or immunological agent. It is used to treat
 CC or prevent viral infections, and to prevent the spread of such
 CC infections by treating inanimate objects, ex vivo blood, blood
 CC prods. or tissue.
 CC Sequence 101 AA;
 SQ

Query Match 100.0%; Score 683; DB 1; Length 101;
 Best Local Similarity 100.0%; Pred. No. 8.24e-60;
 Matches 101; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 LGKFSQTCYNIAIQSVLTSTCERNNGYNTSSIDLNSVIENVDSGLKWQPSNFETCRN 60
 QY 1 LGKFSQTCYNIAIQSVLTSTCERNNGYNTSSIDLNSVIENVDSGLKWQPSNFETCRN 60

Db 61 TOLAGSSSLAAECKTRAQOFVSTKINLDDHIANIDGTLKYE 101
 QY 61 TOLAGSSSLAAECKTRAQOFVSTKINLDDHIANIDGTLKYE 101

RESULT 4
 ID W80553 standard; Protein; 109 AA.
 AC W80553.
 DT 09-DEC-1998 (first entry)
 DE Antiviral protein, cyanovirin-N.
 KW Cyanovirin-N; recombinant; cyanovirin; cyanobacterium; antiviral;
 KW HIV-1.
 OS Nostoc ellipsoforum.
 FH Key Location/Qualifiers
 FT Peptide 1..8
 FT /note= "FLAG octapeptide"
 PN US5821081-A.
 PD 13-OCT-1998.
 PF 26-APR-1996; 638610.
 PR 26-APR-1996; US-638610.
 PR 27-APR-1995; US-429965.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Boyd MR, Gustafson KR, McMahon JB, Shoemaker RH;
 DR WPI: 98-567657/48.
 DR N-PSDB: V56026.
 PT DNA encoding cyanovirin polypeptide(s) - useful for producing
 PT recombinant polypeptides with antiviral activity
 PS Claim 1; Fig 2; 33pp; English.
 CC This represents an antiviral protein cyanovirin-N. A vector containing
 CC a nucleic acid molecule (V56025 or V56026) can be used to transform a
 CC host cell for the recombinant production of the cyanovirin polypeptides.
 CC The cyanovirins are derived from the cyanobacterium Nostoc ellipsoforum,
 CC and have antiviral activity, e.g. with EC50 values of 0.4-7.6 nM against
 CC various HIV-1 strains and isolates.
 CC Sequence 109 AA;
 SQ

Query Match 100.0%; Score 683; DB 1; Length 109;
 Best Local Similarity 100.0%; Pred. No. 8.24e-60;
 Matches 101; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 9 LGKFSQTCYNIAIQSVLTSTCERNNGYNTSSIDLNSVIENVDSGLKWQPSNFETCRN 68
 QY 1 LGKFSQTCYNIAIQSVLTSTCERNNGYNTSSIDLNSVIENVDSGLKWQPSNFETCRN 60

Db 69 TOLAGSSSLAAECKTRAQOFVSTKINLDDHIANIDGTLKYE 109
 QY 61 TOLAGSSSLAAECKTRAQOFVSTKINLDDHIANIDGTLKYE 101

RESULT 5
 ID W67570 standard; Protein; 109 AA.
 AC W67570.
 DT 02-MAR-1999 (first entry)
 DE FLAG epitope-cyanovirin fusion protein.
 KW Antiviral protein; cyanovirin; inhibition; infectivity; replication;
 KW cytopathy; virus; HIV; infection; epitope.
 OS Synthetic.
 OS Nostoc ellipsoforum.
 FH Key Location/Qualifiers
 FT Region 1..8
 FT /label= FLAG-epitope
 FT Region 10..109
 FT /label= cyanovirin_N
 PN US5843882-A.
 PD 01-DEC-1998.
 PF 27-APR-1995; 429965.
 PR 27-APR-1995; US-429965.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Boyd MR, Gustafson KR, McMahon JB, Shoemaker RH;
 DR WPI: 99-044625/04.
 DR N-PSDB: V34402.
 PT Nostoc ellipsoforum proteins or peptide(s) - with antiviral

PT activity
PS Disclosure; Column 27-28; 30pp; English.
CC This sequence represents a synthetic fusion protein comprising the
CC antiviral protein, designated cyanovirin, from Nostoc ellipsosporum
CC with a FLAG epitope peptide fused at its N-terminus. The antiviral
CC protein, or peptide of at least 9 amino acid residues, is used to
CC inhibit the infectivity, replication and cytopathic effects of viruses,
CC especially HIV-1 or HIV-2, in the treatment or prevention of viral
CC infections.
SQ Sequence 109 AA;

Query Match 100.0%; Score 683; DB 1; Length 109;
Best Local Similarity 100.0%; Pred. No. 8.24e-60;
Matches 101; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 9 LGRFSQTCYNSAIOGSLTSTCERNGYNTSSIDLNSVIENVDSGLKWQPSNFIETCRN 68
QY 1 LGRFSQTCYNSAIOGSLTSTCERNGYNTSSIDLNSVIENVDSGLKWQPSNFIETCRN 60

D 69 TQLAGSSELAACKTRAAQGFVSTKINLDDHIANIDGTLKYE 109
QY 61 TQLAGSSELAACKTRAAQGFVSTKINLDDHIANIDGTLKYE 101

RESULT 6
ID W06812 standard; Protein; 109 AA.
AC W06812;
DT 17-MAR-1997 (first entry)
DE FLAG-cyanovirin-N fusion protein.
KW Cyanovirin-N: cyanobacterium; antiviral; virucide; HIV-1; HIV-2;
KW SIV; human immunodeficiency virus; retrovirus; AIDS; therapy.
OS Chimeric Nostoc ellipsosporum;
OS Chimeric synthetic.
FH Key Location/Qualifiers
FT peptide 1..8
FT /label= FLAG
FT protein 9..109
FT /label= Cyanovirin-N
PD W09634107-A2.
PN 31-OCT-1996.
PF 26-APR-1996; U05908.
PR 27-APR-1995; US-429965.
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
PI Boyd MR, Gustafson KR, McMahon JB, Shoemaker RH;
DR N-PSDB; T45979.
PT Antiviral protein from Nostoc ellipsosporum - used for treating or
PT preventing viral infections, esp. infections caused by retroviruses
PT such as HIV
PS Example 2; Page 79-80; 99pp; English.
CC A polypeptide (W06812) comprises a FLAG octapeptide fused to the
CC antiviral cyanovirin-N (see also W06811) of Nostoc ellipsosporum.
CC It can be produced in transfected host cells utilising the pFLAG-1
CC vector including a synthetic gene (T45979) and purified using
CC anti-FLAG antibodies. Cyanovirin-N shows antiviral activity
CC against immunodeficiency retroviruses, esp. HIV-1, HIV-2 and SIV.
CC It can also be produced as a conjugate with e.g. a toxin (esp.
CC Pseudomonas exotoxin) or immunological agent. It is used to treat
CC or prevent viral infections, and to prevent the spread of such
CC infections by treating inanimate objects, ex vivo blood, blood
CC prods. or tissue.
SQ Sequence 109 AA;

Query Match 100.0%; Score 683; DB 1; Length 109;
Best Local Similarity 100.0%; Pred. No. 8.24e-60;
Matches 101; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 9 LGRFSQTCYNSAIOGSLTSTCERNGYNTSSIDLNSVIENVDSGLKWQPSNFIETCRN 68
QY 1 LGRFSQTCYNSAIOGSLTSTCERNGYNTSSIDLNSVIENVDSGLKWQPSNFIETCRN 60

Db 69 TQLAGSSELAACKTRAAQGFVSTKINLDDHIANIDGTLKYE 109
QY 61 TQLAGSSELAACKTRAAQGFVSTKINLDDHIANIDGTLKYE 101

QY 61 TQLAGSSELAACKTRAAQGFVSTKINLDDHIANIDGTLKYE 101

RESULT 7
ID W26541 standard; Protein; 618 AA.
AC W26541;
DT 12-JAN-1998 (first entry)
DE Trypanosoma cruzi antigen.
KW Antigen; epitope; vaccine; protective immunity; Chagas disease;
KW diagnosis; therapy; immunoassay.
OS Trypanosoma cruzi Tulahean strain C2.
PN W09718475-A1.
PD 22-MAY-1997.
PF 14-NOV-1996; U18624.
PR 14-NOV-1995; US-557309.
PA (CORI-) CORIXA CORP.
PI Houghton RL, Lodes MJ, Reed SG, Skeiky YAW;
DR WPI: 97-289413/26.
DR N-PSDB; T69167.
PT Diagnosing Trypanosoma cruzi infection by detecting antibodies to
PT novel antigens - which are useful in vaccines to provide protective
PT immunity against Chagas' disease
PS Disclosure; Page 88-91; 110pp; English.
CC This polypeptide sequence comprises a full-length antigen of
CC Trypanosoma cruzi, identified by sequencing a DNA clone (see T69167)
CC obtained by screening a Trypanosoma cruzi genomic expression library
CC with pools of sera from infected individuals. T. cruzi antigens
CC (see W26530-41), or epitope-containing repeat sequences (see W19094-
CC 102, W19079-86 and W26542-44) of native antigens, can be used in a
CC variety of immunoassays for detecting T. cruzi infection in a
CC blood, serum, plasma, saliva, cerebrospinal fluid or urine sample.
CC The polypeptides are also useful in vaccines and pharmaceutical
CC compositions for inducing protective immunity against Chagas
CC disease. They can be produced by expression in transformed or
CC transfected host cells.
SQ Sequence 618 AA;

Query Match 12.9%; Score 88; DB 1; Length 618;
Best Local Similarity 30.0%; Pred. No. 9.36e+00;
Matches 15; Conservative 14; Mismatches 18; Indels 3; Gaps 3;

Db 350 GGNLISLYENKSGSLVAVHTTOLERIKTVLKRQWELDEALTRCRST 399
QY 15 GSVLTSTCE-RTNGGYNTSSIDLNSVIENVDSGLK-WQP-SNFIETCRNT 61

RESULT 8
ID W76700 standard; Protein; 224 AA.
AC W76700;
DT 02-FEB-1999 (first entry)
DE Mouse antioxidant protein 2 (AOP2).
KW Antioxidant protein 2; AOP2; mouse; atherosclerosis; Ath1;
KW heart disease; diagnosis; therapy; drug screening.
OS Mus sp.
FH Key Location/Qualifiers
FT Misc_difference 124
FT /note= "Asp in DBA/2J, C3H and BALB/c mice, and
FT Ala in C57BL/6J"
PN W09843666-A1.
PD 08-OCT-1998.
PF 01-APR-1998; U06666.
PR 02-APR-1997; US-040897.
PA (BGHM) BRIGHAM & WOMENS HOSPITAL.
PI (JACK-) JACKSON LAB.
PI Beier DR, Paigen B;
DR WPI: 98-56267/48.
DR N-PSDB; V62048.
PT New isolated antioxidant protein 2 gene - used to develop products
PT for modulating antioxidant activity in vivo and for treatment of
PT oxidative damage, atherosclerosis and heart disease
PS Claim 5; Page 115; 139pp; English.
CC This is the amino acid sequence of novel murine antioxidant protein
CC 2 (AOP2), as deduced from an Aop2 cDNA sequence (see V62048). The

[illegible]

PS Disclosure; Page 25; 36pp;

PS Disclosure; Page 25; 36pp;

CC 1-Aminocyclopropane carboxylase oxidase (ACC oxidase) GEPE-1
 CC (W09880) is an enzyme involved in the biosynthesis of ethylene in
 CC plants. In a method for the commercial production of transgenic
 CC plants, Agrobacterium vectors carrying antisense genes for ACC
 CC oxidase (see also T66248) or ACC synthase (see also T66246-47) are
 CC used to inoculate petiole explants of a mother plant, pref.
 CC Pelargonium x domesticum. The resulting callus is cultured and
 CC used to regenerate transgenic plants. The antisense genes prevent
 CC ACC oxidase or ACC synthase expression and hence ethylene formation
 CC and fruit ripening.
 CC Sequence 318 AA;

Query Match 12.4%; Score 85; DB 1; Length 318;
 Best Local Similarity 17.3%; Pred. No. 1.64e+01;
 Matches 11; Conservative 23; Mismatches 28; Indels 1; Gaps 1;
 DB 70 ASKGLGVEVEVD-IDWESTFLKHLPSNISOVDLOQDEYRKVMKEFAAKLELAEL 128
 QY 32 SSIDLNSVIENVDSGLKWPNSFIETCRNTQLAGSSELAACKTRAQQFVSKINLDDHI 91
 DB 129 LDL 131
 QY 92 ANI 94

RESULT 12
 ID W55071 standard; Protein: 258 AA.
 AC W55071;
 DT 02-OCT-1998 (first entry)
 DE Streptococcus pneumoniae SP0012 protein.
 KW Streptococcus pneumoniae; antigen; vaccine; infection; diagnosis;
 KW detection; pneumonia; otitis media; meningitis.
 OS Streptococcus pneumoniae.
 PN W09818930-A2.
 PD 07-MAY-1998.
 PF 30-OCT-1997; U19422.
 PR 31-OCT-1996; US-029960.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Choi GH, Hromockyj A, Johnson LS, Kunsch CA;
 DR WPI: 98-272224/24.
 DR N-PSDB: V27331.
 PT Nucleic acid encoding antigenic peptide(s) from Streptococcus
 PT pneumoniae - or their epitope-containing fragments, useful in
 PT protective or therapeutic vaccines, and for diagnosis
 PS Claim 1; Page 52; 118pp; English.

CC The present sequence represents a protein from Streptococcus pneumoniae.
 CC The nucleic acid sequence encoding the Streptococcus pneumoniae protein
 CC can be useful in vaccines for inducing protective antibodies against
 CC Streptococcus pneumoniae, for treatment or prevention of infection e.g.
 CC pneumonia, otitis media or meningitis. Probes based on the nucleic acid
 CC are used to detect Streptococcus infection (by usual hybridisation or
 CC amplification methods), also for isolating Streptococcus genes or their
 CC allelic variants. The protein can be used similarly to detect specific
 CC antibodies in standard immunoassays, especially for diagnosing or
 CC monitoring infections. Antibodies which bind the protein are used to
 CC detect corresponding antigens, to purify the protein and for passive
 CC immunisation (optionally coupled to a toxin). Vaccines are administered,
 CC e.g. by injection, orally or through the skin, typically at 0.01-1000
 CC (especially 10-300) mu g/ml per dose.
 CC Sequence 258 AA;

Query Match 12.0%; Score 82; DB 1; Length 258;
 Best Local Similarity 27.1%; Pred. No. 2.86e+01;
 Matches 13; Conservative 18; Mismatches 13; Indels 4; Gaps 4;

DB 36 QKDGSVAGTDIDATAVEFKYGVVWNPIDW-DL-KEALTKGTIDL 81

QY 24 RTNGYNTSSIDLNS-VIENVDSGLKWPNSFIETCRNTOLA-GSSEL 69

RESULT 13
 ID W30662 standard; Protein: 354 AA.
 AC W30662;

DT 13-APR-1999 (first entry)
 DE Human GDP-mannose 4,6-dehydratase protein #1.
 KW Human; GDP-mannose 4,6-dehydratase; GM4,6D; fucosylation;
 KW glycoconjugate.
 OS Homo sapiens.
 PN US5869307-A.
 PD 09-FEB-1999.
 PF 03-DEC-1997; 984246.
 PR 22-NOV-1996; US-753233.
 PR 03-DEC-1997; US-984246.
 PA (GEMY) GENETICS INST INC.
 PI Kriz R, Kumar R, Sullivan F;
 DR WPI: 99-152775/13.
 DR N-PSDB: X03928.
 PT Human GDP-mannose 4,6-dehydratase polypeptide - useful in drug
 PT screening assays
 PS Claim 1; Column 9-12; 9pp; English.
 CC The present invention describes a nucleotide sequence encoding two human
 CC GDP-mannose 4,6-dehydratase (GM4,6D) proteins comprising 354 or 372
 CC amino acids. The shorter protein represents amino acid residues 19 to
 CC 372 of the longer protein, and they both have GM4,6D activity. The
 CC present sequence represents the shorter GM4,6D protein. The GM4,6D
 CC enzyme is useful for screening for GM4,6D inhibitors in assays, which
 CC would be useful for treating diseases affected by the level of cellular
 CC fucosylation or the fucosylation of glycoconjugates.
 CC Sequence 354 AA;

Query Match 11.7%; Score 80; DB 1; Length 354;
 Best Local Similarity 21.1%; Pred. No. 4.12e+01;
 Matches 16; Conservative 26; Mismatches 30; Indels 4; Gaps 4;
 DB 37 RRSSEFNTGRIEHLKYNPOAHIEGNNKLYGDLTDSCTL-VKIINEVKTEYNLGAQSH 95
 QY 24 RTNGYNTSSIDL-L-NSVIENVDSGLKWPNSFIE-TCRNTQLAGSSELAACKTRAQOF 80
 DB 96 VXISFDLAETADVDG 111
 QY 81 VSTKINLDDHIANDIG 96

RESULT 14
 ID W39739 standard; Protein: 354 AA.
 AC W39739;
 DT 29-MAY-1998 (first entry)
 DE Human GM4,6D protein #2.
 KW Guanidine diphosphate-mannose 4,6-dehydratase; GM4,6D; GDP; GDP-fucose;
 KW fucosylated glycoconjugate; screening assay; treatment; inflammation;
 KW arthritis; transplant rejection; asthma; sepsis; reperfusion injury;
 KW stroke; infection.
 OS Homo sapiens.
 PN US5728568-A.
 PD 17-MAR-1998.
 PF 22-NOV-1996; 753233.
 PR 22-NOV-1996; US-753233.
 PA (GEMY) GENETICS INST INC.
 PI Kriz R, Kumar R, Sullivan F;
 DR WPI: 98-206571/18.
 DR N-PSDB: V10132.
 PT GDP-mannose 4,6-dehydratase cDNA - useful for producing recombinant
 PT GDP-mannose 4,6-dehydratase
 PS Claim 1; Column 9-12; 9pp; English.
 CC This protein sequence represents a novel GDP-mannose 4,6-dehydratase,
 CC GM4,6D #2. An alternative protein from the same clone is represented
 CC in W39740. Recombinant GM4,6D can be used for converting GDP-mannose to
 CC GDP-fucose, which is useful for preparing fucosylated glycoconjugates
 CC such as sialyl Lewis X. The proteins can also be used in screening assays
 CC for GM 4,6D inhibitors, which may be useful for treating fucose-mediated
 CC conditions, e.g. inflammation, arthritis, transplant rejection, asthma,
 CC sepsis, reperfusion injury, stroke and infections.
 CC Sequence 354 AA;

Query Match 11.7%; Score 80; DB 1; Length 354;
 Best Local Similarity 21.1%; Pred. No. 4.12e+01;

Search completed: Wed Aug 16 09:46:42 2000
Job time : 8 secs.